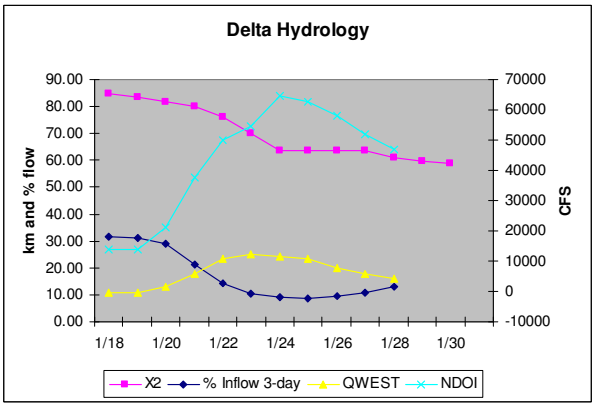
SMELT WORKING GROUP
Monday, February 1, 2010

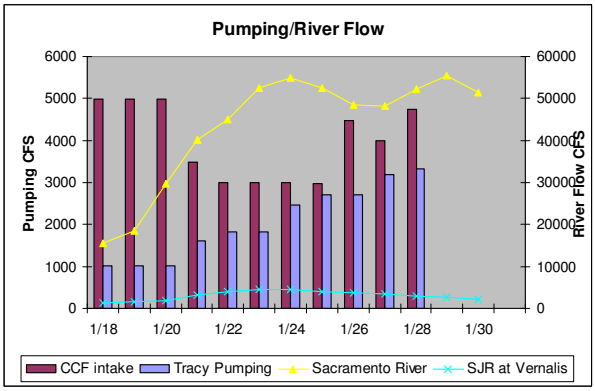
Recommendation for the week of February 1, 2010:

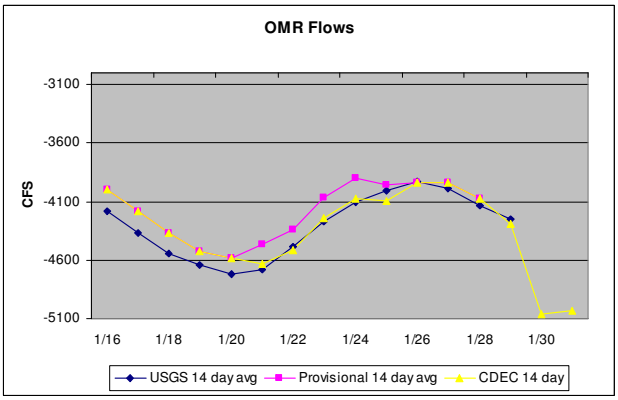
No recommendation at this time because the triggers for action 1 have not been met. The group is monitoring the turbidity and salvage triggers under Action 1 in the biological opinion.

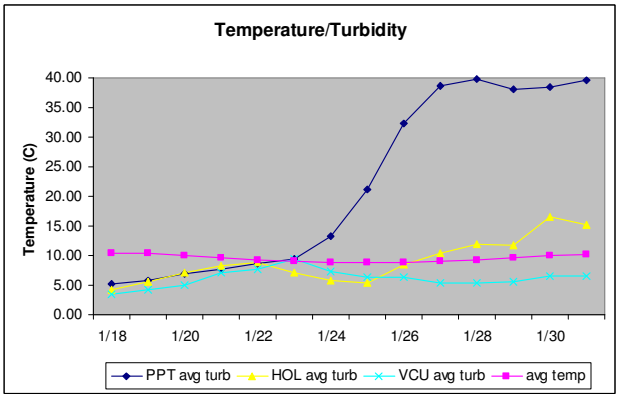
1) Current environmental data.

Temperature for the 3 station average is 10.1 C. Turbidity (as per the BO, part B of Action 1) is 39.57 NTU for Prisoner's Point, 14.48 NTU for Holland Tract, and 6.23 for Victoria Canal. The provisional estimate by the projects as of January 28 is -4079 cfs for 14 day average, -3790 cfs for 5 day average. USGS OMR as of January 29 is -4252 cfs 14 day average and -4716 cfs for 5 day average. No salvage has been reported for either delta or longfin smelt since the single delta smelt on December 2, 2009 (expanded to 4 fish). See the graphs below.

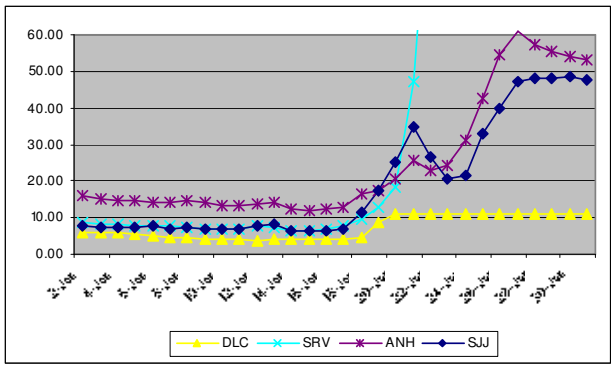


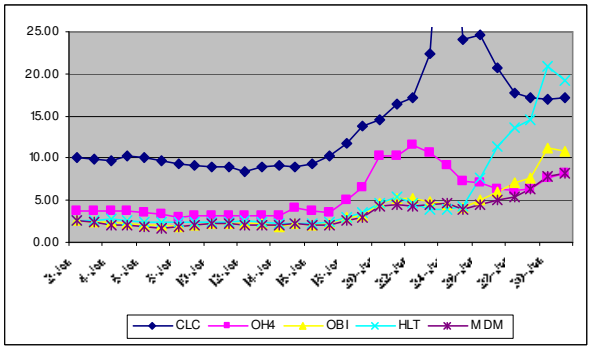


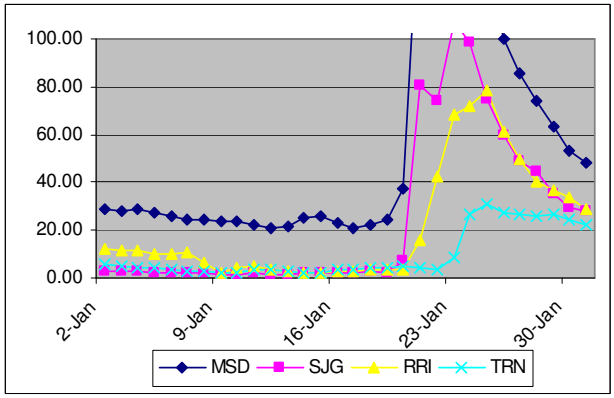


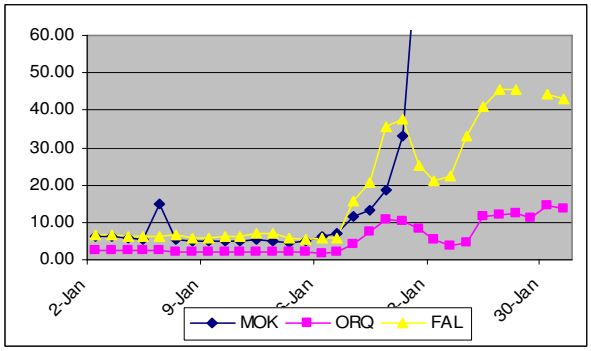


Delta Turbidity at non-criteria stations—Daily averages









2) Delta fish monitoring:

There was no new sampling data to discuss. The Spring Kodiak Trawl #1 was in the field January 11 through 14. 61 of the 88 delta smelt collected were from stations 606 and 609 (Montezuma Slough). The remaining delta smelt were collected from stations in the Sacramento River Deep Water Shipping Channel, Sacramento River mainstem, and the confluence of the Sacramento and San Joaquin Rivers. Spring Kodiak Trawl #2 will be in the field February 8 through 11. Smelt Larval Survey #1 was in the field January 4 and 5. No delta smelt were detected. Results from larval surveys and the SKT are available online at: http://www.delta.dfg.ca.gov/data/projects/?ProjectID=SKT.

3) Discussion for Recommendation

We are currently monitoring for the triggers (Part B) that would initiate Action 1. The triggers are: a) an average daily turbidity of 12 NTU at each of the monitoring stations (Prisoner's Pt, Holland Cut and Victoria Canal) over three days OR b) salvage of 2 fish (expanded to 8). No salvage has been recorded. The turbidity average for Prisoner's Point and Holland Cut has exceeded 12 NTU, but has not for Victoria Canal. Thus, neither the salvage nor the turbidity triggers have been met. No actions are recommended at this time.

The group discussed the turbidity patterns in the Delta. The San Joaquin, Mokelumne, and Sacramento Rivers are all turbid, with stations immediately west and northeast of Frank's Tract turbid as well. Turbidities appear to be depositing in Frank's Tract, which could be contributing to the relative clarity for the stations to the south. Stations in the south Delta remain

comparatively clear, except for Clifton Court Forebay, which appears to be getting turbidity from either Grant Line Canal or Old River south of the forebay.

The group felt that the high flows on both the San Joaquin and Sacramento Rivers are helping to maintain both smelt species' populations in the Sacramento River, confluence, and downstream, and out of the direct influence of the pumps. The group also noted that the facilities currently are restricted in pumping by the NMFS OCAP BO, which calls for OMR levels to remain no more negative than -5,000cfs. The group believes this restriction would also provide benefit for the smelt species given current conditions.

WEEKLY ADVICE FOR THE DEPARTMENT OF FISH AND GAME FOR LONGFIN SMELT

Advice for week of February 1:
The Smelt Working Group believes that OMR no more negative than -5,000 cfs (the limit currently in place for salmon) is protective of longfin smelt at this time**.** Sacramento River flows at Rio Vista and San Joaquin River flows at Vernalis did not reach the thresholds to relax OMR restrictions based on longfin smelt larva criteria; however, these flows and Qwest were probably sufficient to transport many longfin smelt larvae from the central delta toward Suisun Bay, rather than south.

Basis for advice:
The 2009 State Water Project 2081 for longfin smelt states that advice to the DFG Director shall be based on:

1. Adult Salvage – total adult (>=80mm) longfin smelt expanded salvage (SWP+CVP) for December through February > 5 times the Fall Midwater Trawl longfin smelt annual abundance index.

2. Adult abundance, distribution or other information indicates that OMR flow advice is warranted.

3. Larva distribution in the Smelt Larva Survey or the 20mm Survey finds longfin smelt larvae present at 8 of 12 Central and South Delta sampling stations in 1 survey (809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918, 919).

4. Larva catch per tow exceeds 15 longfin smelt larvae or juveniles in 4 or more of the 12 survey stations listed.

<u>Current Information</u>

No adult longfin smelt were salvaged in the past week and none have been salvaged since the December 1, 2009 criterion period for salvage began. The threshold for the first criterion is a combined expanded salvage exceeding 325 adults occurring during the period December 1 through February 28.

There is no new information on adult distribution. Only a few longfin smelt adults have been collected in the San Joaquin River and farther south in December and January. In December, FMWT

caught 2 at Station 810 (north/upstream of False River) and Bay Study got 1 at 837 (Antioch Bridge). In January, Bay Study collected 1 at 864 (near Old River mouth).

Both longfin smelt larva criteria were surpassed during the second Smelt Larva Survey January 19&21. Samples from 29 of 35 stations were processed and posted on the web prior to SWG discussion, including those from all criteria stations. Longfin smelt larvae were detected at 10 of 12 criteria locations and larva catch exceeded 15 at 4 criteria locations. Larvae were detected at almost all stations where samples were processed.

This triggers OMR flow advice unless outflow thresholds are reached (see below). If either larva/juvenile condition triggers advice, advice can restrict OMR flow levels to between -1,250 and -5,000 cfs on a 14-day running average and the 5-day running average is within 25 percent of the required OMR flow.

Outflows were approaching thresholds to re-set criteria triggers, but did not reach them last week (see graphics below). OMR restrictions for longfin smelt larvae would not be implemented or would be re-set if net daily Sacramento River flow at Rio Vista surpassed 55,000 cfs or if net daily San Joaquin River flow at Vernalis surpassed 8,000 cfs. As of January 25, the Sacramento River at Rio Vista net flow reached about 48,000 cfs, and began to decline (Figure 1). The San Joaquin River at Vernalis reached a peak of 4,730 cfs on January 23 and began to decline (Figure 2). Also, Qwest became positive on January 21 and surpassed positive 10,000 cfs on January 23 and remained at or above positive 10,000 cfs through January 25 (Figure 3). High Sacramento River flows probably moved all larval longfin smelt from the main channel below Rio Vista. The strong positive Qwest likely transported longfin smelt larvae from the main stem San Joaquin River and the south Delta to Franks Tract to the west toward Suisun Bay. Current OMR negative flows are not particularly strong.

Figure 1. Tidally averaged discharge for Sacramento River at Rio Vista.

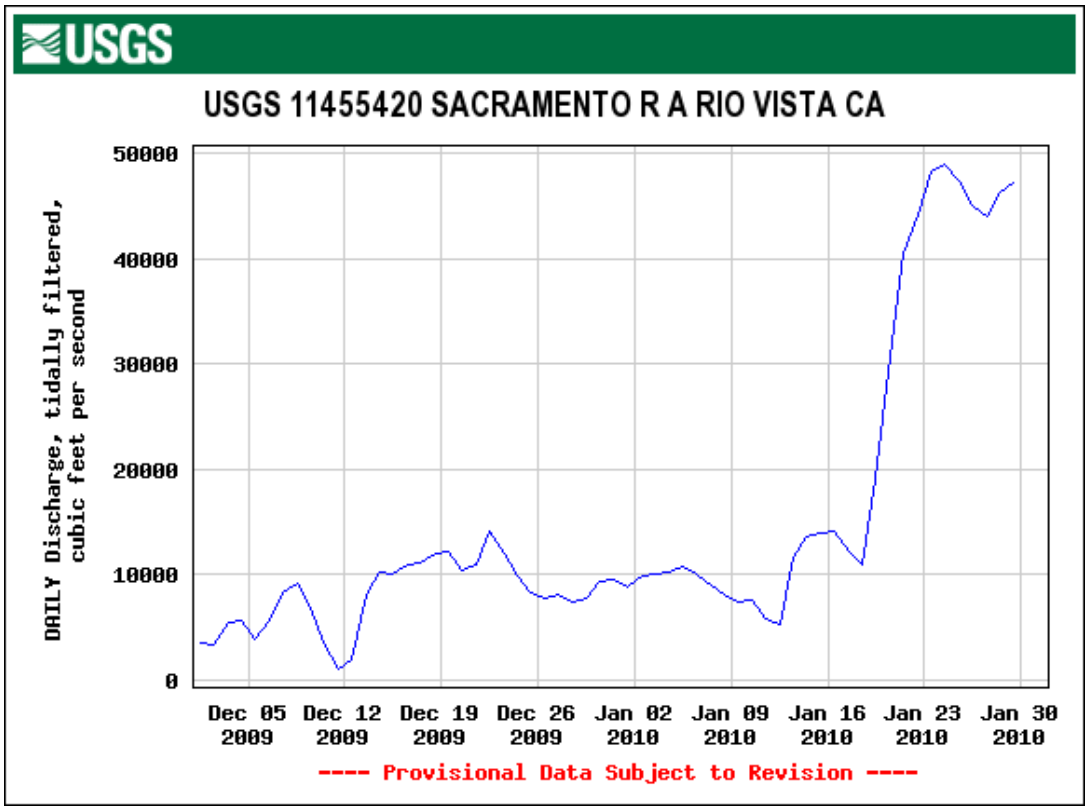

USGS
USGS 11455420 SACRAMENTO R A RIO VISTA CA
DAILY Discharge, tidally filtered, cubic feet per second
50000
40000
30000
20000
10000
0
Dec 05 2009
Dec 12 2009
Dec 19 2009
Dec 26 2009
Jan 02 2010
Jan 09 2010
Jan 16 2010
Jan 23 2010
Jan 30 2010
---- Provisional Data Subject to Revision ----

Figure 2. Clifton court intake, Tracy export pumping and daily river flows for the Sacramento River and San Joaquin River at Vernalis.

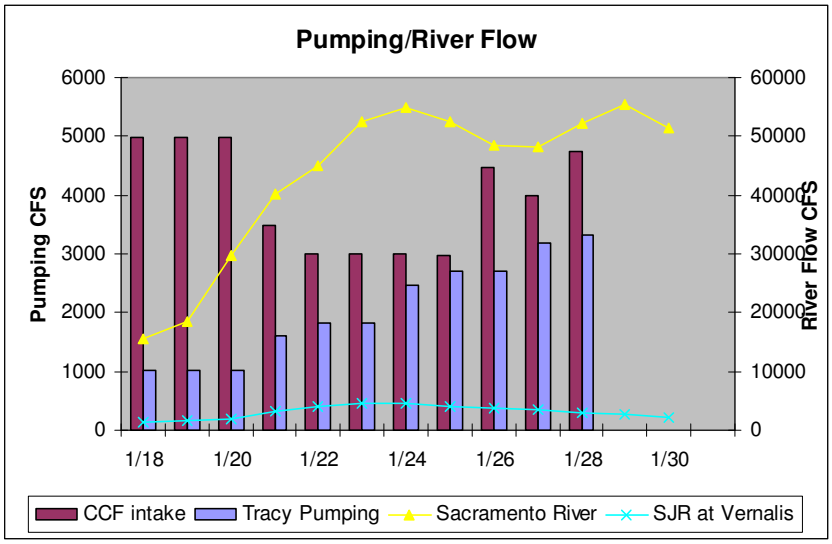


Figure 3. Location of X2 (km), export:inflow ratio (3-day average), Qwest and net delta outflow index all in mean daily form unless identified otherwise.